III. AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-24. (Cancelled)

25. (Original): A method of tissue culturing processing comprising the steps of:
placing at least one explant in at least one pocket on a surface of a porous framework;
adding a first nourishment solution to said porous framework;
supplying said first nourishment solution to said explant;
growing at least an initial growth of said explant on said porous framework;
adding a second nourishment solution to said porous framework;
balancing retentive exchange capacities with removal exchange capacities of said first nourishment solution in said porous framework;
affirmatively removing said first nourishment solution from said porous framework with said second nourishment solution; and
secondarily growing said at least initially grown explants.

26-32. (Cancelled)

33. (Original): A method of tissue culturing processing comprising the steps of:
determining at least one transplant growth criterion appropriate to a given plant species;
placing a tissue culture growth media and a plurality of explants in a first environment;
nurturing at least an initial growth of said explants in said first environment;
establishing said at least one transplant growth criterion for a substantial portion of said plurality of initially grown explants while situated in said first environment;
extruding said initially grown explants and at least some of said tissue culture media from said first environment at a time when said transplant growth criterion is substantially established;

inserting said initially grown explants and at least some of said tissue culture media from said first environment in a second environment immediately after extruding said initially grown explants and at least some of said tissue culture media from said first environment; and

secondarily growing said initially grown explants.

34. (Original): A method of tissue culturing processing according to claim 33 and further comprising the steps of

supplying a synthetic retentive capability; and

maintaining said synthetic retentive capability during said step of extruding said initially grown explants and at least some of said tissue culture media from said first environment at a time when said transplant growth criterion is substantially established and said step of inserting said initially grown explants and at least some of said tissue culture media from said first environment in a second environment immediately after extruding said initially grown explants and at least some of said tissue culture media from said first environment.

35. (Original): A method of tissue culturing processing according to claim 34 and further comprising the step of properly balancing said synthetic retentive capability with a plant yield ability.

36. (Original): A method of tissue culturing processing according to claim 33 wherein said step of placing a tissue culture growth media and a plurality of explants in a first environment comprises the step of placing said tissue culture growth media and a plurality of explants in a first matrix of transplant containers.

37. (Original): A method of tissue culturing processing according to claim 33 wherein said step of establishing said at least one transplant growth criterion for a substantial portion of said plurality of initially grown explants while situated in said first environment comprises the step of affirmatively establishing said at least one transplant growth criterion for a substantial portion of said plurality of initially grown explants while situated in said first environment.

38. (Original): A method of tissue culturing processing according to claim 33 wherein said steps of extruding said initially grown explants and at least some of said tissue culture media from said first environment at a time when said transplant growth criterion is substantially established and inserting said initially grown explants and at least some of said tissue culture media from said first environment in a second environment immediately after extruding said initially grown explants and at least some of said tissue culture media from said first environment comprises the step of simultaneously extruding said initially grown explants and at least some of said tissue culture media from said first environment at a time when said transplant growth criterion is substantially established and simultaneously inserting said initially grown explants and at least some of said tissue culture media from said first environment in a second environment immediately after extruding said initially grown explants and at least some of said tissue culture media from said first environment.

39. (Original): A method of tissue culturing processing according to claim 33 wherein said step of inserting said initially grown explants and at least some of said tissue culture media from said first environment in a second environment immediately after extruding said initially grown explants and at least some of said tissue culture media from said first environment comprises the step of continuately inserting said initially grown explants and at least some of said tissue culture media from said first environment in a second environment immediately after extruding said initially grown explants and at least some of said tissue culture media from said first environment.

40. (Original): A method of tissue culturing processing according to claim 33 wherein said step of nurturing at least an initial growth of said explants in said first environment comprises the step of adding at least one nourishment solution to said tissue culture growth media and said explants.

41. (Original): A method of tissue culturing processing according to claim 33 wherein said step of placing a tissue culture growth media and a plurality of explants in a first

environment comprises the step of placing said tissue culture growth media and said plurality of explants in dense population.

42. (Currently Amended): A method of tissue culturing processing according to ~~claim 33 or 41~~ claim 33 wherein said step of inserting said initially grown explants and at least some of said tissue culture media from said first environment in a second environment immediately after extruding said initially grown explants and at least some of said tissue culture media from said first environment comprises the step of inserting said initially grown explants and at least some of said tissue culture media from said first environment in a less dense population than said first environment immediately after extruding said initially grown explants and at least some of said tissue culture media from said first environment.

43. (Original): A method of tissue culturing processing according to claim 33 and further comprising the steps of
growing said explant into a plantlet; and
placing said plantlet into a new medium selected from the group consisting of soil, peat moss, peat, bark, inorganic substances, organic substances, gravel, sand, natural substances, man-made substances, clay, liquid, finishing media, and prefinishing media.

44-59. (Cancelled)

60. (Original): A method of tissue culturing processing according to claim 33 wherein said step of placing a tissue culture growth media and a plurality of explants in a first environment comprises the step of placing said plurality of explant on a surface of a porous framework and wherein said step of nurturing at least an initial growth of said explants in said first environment comprises the step of adding at least one nourishment solution to said porous framework.

61. (Currently Amended): A method of tissue culturing processing according to ~~claim 2, 12, 16, 20, 25 or 60~~ claim 60 and further comprising the step of substantially uniformly distributing said at least one nourishment solution throughout said porous framework.

62. (Currently Amended): A method of tissue culturing processing according to ~~claim 1 or 61~~ claim 61 wherein said step of substantially uniformly distributing said at least one nourishment solution throughout said porous framework comprises the step of almost equally distributing said at least one nourishment solution throughout said porous framework.

63. (Cancelled)

64. (Currently Amended): A method of tissue culturing processing according to ~~claim 2, 6, 16, 20, 25 or 60~~ claim 60 and further comprising the step of amply contacting at least part of said explant in said pocket to said at least one nourishment solution.

65. (Currently Amended): A method of tissue culturing processing according to ~~claim 1 or 64~~ claim 64 wherein said step of amply contacting at least part of said explant in said pocket to said at least one nourishment solution comprises the step of contacting said at least one explant to a surface of said pocket at a percentage contact value, said percentage contact value selected from the group consisting of:

- greater than about 25%;
- greater than about 30%; and
- greater than about 35%.

66. (Cancelled)

67. (Currently Amended): A method of tissue culturing processing according to ~~claim 2, 6, 12, 16, 20 or 60~~ claim 60 wherein said step of adding at least one nourishment solution comprises the step of adding a first nourishment solution to said porous framework.

68. (Original): A method of tissue culturing processing according to claim 67 and further comprising the steps of:
adding a second nourishment solution to said porous framework;

balancing retentive exchange capacities with removal exchange capacities of said first nourishment solution in said porous framework; and

affirmatively removing said first nourishment solution from said porous framework with said second nourishment solution.

69. (Currently Amended): A method of tissue culturing processing according to ~~claim 1 or 68~~ claim 68 wherein said step of balancing retentive exchange capacities with removal exchange capacities of said first nourishment solution in said porous framework comprises the step of providing a removal pressure of said first nourishment solution greater than a retentive force of first nourishment solution to said porous framework.

70. (Currently Amended): A method of tissue culturing processing according to ~~claim 1 or 68~~ claim 68 wherein said step of affirmatively removing said first nourishment solution from said porous framework with said second nourishment solution comprises the step of substantially removing said first nourishment solution from said porous framework.

71. (Cancelled)

72. (Currently Amended): A method of tissue culturing processing according to ~~claim 1 or 68~~ claim 68 wherein said step of adding a second nourishment solution to said porous framework comprises the step of adding a refresher solution of said first nourishment solution to said porous framework.

73. (Currently Amended): A method of tissue culturing processing according to ~~claim 2, 6, 12, 16, 25 or 60~~ claim 60 and further comprising the step of defining a plurality of substantially uniform interstitial voids within said porous framework.

74. (Currently Amended): A method of tissue culturing processing according to ~~claim 1 or 73~~ claim 73 wherein said step of defining a plurality of substantially uniform interstitial voids within said porous framework comprises the step of defining a plurality of substantially uniform interstitial voids having a size difference of less than about 25%.

75. (Currently Amended): A method of tissue culturing processing according to ~~claim 1 or 73~~ claim 73 wherein said step of defining a plurality of substantially uniform interstitial voids within said porous framework comprises the step of defining at least some large and at least some small voids.

76. (Currently Amended): A method of tissue culturing processing according to ~~claim 1 or 75~~ claim 75 wherein said step defining large and small voids comprises the step of providing a ratio of said large to small voids selected from the group consisting of:

- about 3 to about 40; and
- about 5 to about 40.

77. (Cancelled)

78. (Currently Amended): A method of tissue culturing processing according to ~~claim 6, 12, 16, 20, 25 or 60~~ claim 60 and further comprising the step of providing an undistorted growth transport field of said porous framework.

79. (Cancelled)

80. (Currently Amended): A method of tissue culturing processing according to ~~claim 2, 6, 12, 20, 25 or 60~~ claim 60 and further comprising the step of optimally balancing air to said at least one nourishment solution within said porous framework.

81. (Currently Amended): A method of tissue culturing processing according to ~~claim 1 or 80~~ claim 80 wherein said step of optimally balancing air to said at least one nourishment solution within said porous framework comprises the step of providing about a 50% of air and about a 50% of nourishment solution in said porous framework.

82-122. (Cancelled)

123. (Original): A sustentacular tissue culturing device comprising:

a plurality of explant transplant containers within which an explant growth is impacted by a punch-transplant device;

a yieldable exit element established on a bottom of said plurality of explant transplant containers;

a tissue culture growth medium contained by said plurality of explant transplant containers; and

a plurality of explants contained within said explant transplant containers and responsive to said growth medium.

124. (Original): A sustentacular tissue culturing device according to claim 123 and further comprising a synthetic retentive capability.

125. (Original): A sustentacular tissue culturing device according to claim 124 and further comprising a proper balance of said synthetic retentive capability with a plant yield ability.

126. (Original): A sustentacular tissue culturing device according to claim 123 wherein said explant transplant containers comprises a first matrix of explant transplant containers.

127. (Original): A sustentacular tissue culturing device according to claim 123 and further comprising a nourishment solution contained within said explant transplant containers.

128. (Original): A sustentacular tissue culturing device according to claim 123 wherein explant transplant containers comprises a dense population of said plurality of explants.

129. (Currently Amended): A sustentacular tissue culturing device according to ~~claim 123 or 128~~ claim 123 and further comprising post transplant containers in a less dense population than said explant transplant containers.

130-138. (Cancelled)

139. (Original): A sustentacular tissue culturing device according to claim 123 wherein said tissue culture growth medium comprises open surface multidirectional porous framework.

140. (Currently Amended): A sustentacular tissue culturing device according to ~~claim 95, 103, 108, 111, 116 or 139~~ claim 139 wherein said open surface multidirectional porous framework comprises open surface multidirectional porous framework capable of substantial uniform distribution of a nourishment solution.

141. (Currently Amended): A sustentacular tissue culturing device according to ~~claim 94 or 140~~ claim 140 wherein said open surface multidirectional porous framework capable of substantial uniform distribution of a nourishment solution comprises an open surface multidirectional porous framework capable of almost equal distribution of a nourishment solution throughout said open surface multidirectional porous framework.

142. (Cancelled)

143. (Currently Amended): A sustentacular tissue culturing device according to ~~claim 95, 99, 108, 111, 116 or 139~~ claim 139 and further comprising an ample contact between at least part of said explant and said pocket.

144. (Currently Amended): A sustentacular tissue culturing device according to ~~claim 94 or 143~~ claim 143 wherein said ample contact between at least part of said explant and said pocket comprises a percentage contact value selected from the group consisting of:

- greater than about 25%;
- greater than about 30%; and
- greater than about 35%.

145. (Cancelled)

146. (Currently Amended): A sustentacular tissue culturing device according to ~~claim 95, 99, 103, 108, 111 or 139~~ claim 139 and further comprising a nourishment solution distributor and an affirmative nourishment solution eliminator.

147. (Original): A sustentacular tissue culturing device according to claim 146 wherein said open surface multidirectional porous framework comprises a nourishment solution exchange capacity and nourishment solution removal capacity balance element within said open surface multidirectional porous framework.

148. (Currently Amended): A sustentacular tissue culturing device according to ~~claim 94 or 147~~ claim 147 wherein said affirmative nourishment solution eliminator comprises a removal pressure of a nourishment solution greater than a retentive force said nourishment solution.

149. (Currently Amended): A sustentacular tissue culturing device according to ~~claim 94 or 146~~ claim 146 wherein said affirmative nourishment solution eliminator comprises a substantial nourishment solution remover element.

150. (Currently Amended): A sustentacular tissue culturing device according to ~~claim 94 or 146~~ claim 146 wherein said nourishment solution distributor comprises a distributor selected from the group consisting of a first nourishment solution distributor, a second nourishment solution distributor, and a refresher nourishment solution distributor.

151. (Currently Amended): A sustentacular tissue culturing device according to ~~claim 95, 99, 103, 108, 116 or 139~~ claim 139 and further comprising a plurality of substantially uniform interstitial voids defined by said open surface multidirectional porous framework.

152. (Currently Amended): A sustentacular tissue culturing device according to ~~claim 94 or 151~~ claim 151 wherein said plurality of substantially uniform interstitial voids comprises a size difference of less than about 25%.

153. (Currently Amended): A sustentacular tissue culturing device according to ~~claim 94 or 151~~ claim 151 wherein said plurality of substantially uniform interstitial voids comprises at least some large and at least some small voids.

154. (Currently Amended): A sustentacular tissue culturing device according to ~~claim 94 or 153~~ claim 153 wherein said at least some large and at least some small voids comprises a ratio of said large to small voids selected from the group consisting of:

- about 3 to about 40; and
- about 5 to about 40.

155. (Cancelled)

156. (Currently Amended): A sustentacular tissue culturing device according to ~~claim 99, 103, 108, 111, 116 or 139~~ claim 139 and further comprising an undistorted growth transport field of said open surface multidirectional porous framework.

157. (Cancelled)

158. (Currently Amended): A sustentacular tissue culturing device according to ~~claim 94, 95, 99, 103, 111, 116 or 139~~ claim 139 and further comprising an optimal balance of air and a nourishment solution within said open surface multidirectional porous framework.

159. (Original): A sustentacular tissue culturing device according to claim 158 wherein said an optimal balance of air and a nourishment solution within said open surface multidirectional porous framework comprises a comprises about a 50% of air and about a 50% of nourishment solution.

160-167. (Cancelled)